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EXECUTIVE SUMMARY

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Study Objectives

This feasibility study is intended to:

- Develop a Senior Center space program to address the current and future needs of the Town of Needham's older citizens.
- Perform an evaluation of the existing building and site.
- Explore development alternatives.
- Explore phasing scenarios.
- Assist the Town and the Conservation Commission in defining a mutally agreeable "Transfer Area" of land that will be legally transfered from the Conservation Commission to the Town via a legislature Home Rule Petition vote.
- Develop a pre-schematic design with plans and elevations and establish estimated costs for construction and site development.

Town of Needham Projected Senior Population Growth

According to MISER (Massachusetts Institute for Social and Economic Research, University of Massachusetts, Amherst) mid-level projections and US Census Bureau statistics, the elder population over 60 years of age is expected to increase 20% between the years 2000 and 2020. In the year 2000, the elder population comprised 22% of the Town's population, in 2010 it is expected to rise to 25% and in 2020 it is expected to rise to 31%, with a projected total of more than 7,500 elders.

Major Design Issues

Site

There were many site considerations that were addressed for developing this site into an appropriate new home for the Council on Aging.

- Vehicular access and safety.
- Pedestrian safety.
- Parking.
- Building expansion and solar orientation.
- Site utilities (sewer, water, gas, electric, telephone/data)
- Minimizing the development's visual and environmental impact.
- Preserving, to the extent possible, the current character of the estate while adding 20,000 sf and 135 parking spaces.

Programming

A space program of approximately 30,000 gross square feet was developed for the master plan. Of this, 16,200 square feet of finished program space (plus 6,454 square feet of unfinished basement) would be built in Phase 1.

Existing Building

Except for the open stair and the three public function rooms on the first floor facing south, the internal configuration of the existing building is not conducive to the programatic needs of the Senior Center. The preservation of the main square volume of the house, its three public rooms and the existing terrace, were priorities.

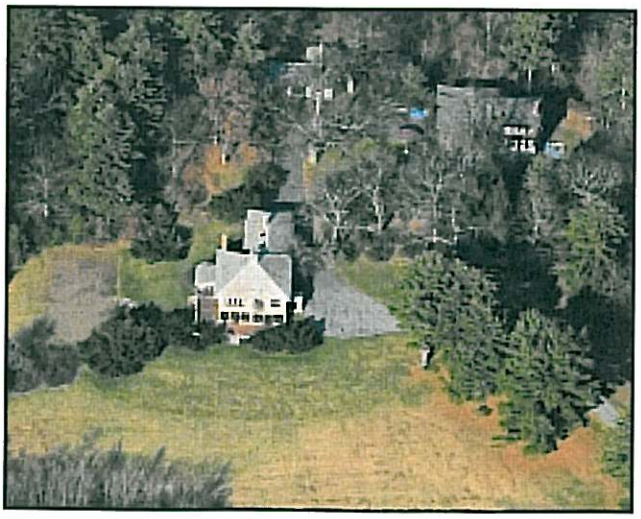

Figure 1.1 Existing aerial view of site from the south.

Figure 1.2 Model of proposed Phase 1 and Phase 2 building development.

The second floors of the main building and the "ell" service wing do not align; the floor at the main house is 36" higher than the floor of the wing. The removal of the wing to the north of the main building allows for expansion to the north and west, the new construction easily adapting to program needs. Since the primary views of the building are from the southeast the additional building bulk is shielded by the eastern and southern facades.

Without copying the original buildng, exterior elements from the existing building are incorporated in the addition - deep eave overhangs, square columns, and fenestration. The addition is designed to "protect the historical significance of the building by making a visual distinction between what is old and what is new." (from the U.S. Department of the Interior's guidelines for additions to historic structures.) (See Appendix E for summary of guidelines for new exterior additions to historic buildings.)

Phasing

The design of this site was based on the premise that its development would occur in phases over time. The space programming, the building and the parking were designed - master planned - to accommodate the fully anticipated use of the site. Phasing scenarios were then developed based on minimum program needs, existing physical site constraints, budget and logical construction sequencing.

A major criterion for the senior center representatives was that the first phase provide - at a minimum - a multi-purpose room no smaller than the existing room (1,500 sf) at the Stephen Palmer Senior Center. Without a space of this size, critical facility programming could not occur.

Three phases comprise the full development of the site:

Phase 1

Building: 16,200 gross square feet of finished space over two levels - including a 1,550 square foot multi-purpose room - plus unfinished mechanical and storage space in the basement.

Parking: Provide 103 parking spaces - 71 near the building and 32 in the lower lot.

Phase 2

Building: Add 2,700 gross square feet of finished space - the multi-purpose room more than doubles in size to 3,500 square feet - plus 4,300 addtional unfinished basement space.

Parking: Add 48 parking spaces north of the existing main lot to accommodate the added program expansion.

Phase 3

Building: Finish 10,770 square feet of basement for future activity and storage spaces. The final building size would be just under 30,000 gross square feet.

Parking: No additional parking is needed since parking is based on a large event in the 3,500 square foot multi-purpose room which would be completed in Phase 2.

Figure 1.3 Model showing proposed Phase 1 building development from southwest.

Figure 1.4 Model showing proposed Phase 2 building development from southwest.

Estimated Costs

The estimated construction costs for the proposed schematic design is as follows:

Estimated Construction Costs*

PHASE 1:	22,660 gross sq. ft. @	$ 291/sf
Site		$ 1,360,313
Renovation		$ 1,292,647
Addition		$ 3,934,953
Total Phase 1		**$ 6,587,914**
PHASE 2:	7,010 gross sq. ft.(+terrace) @	$ 268/sf
PHASE 2		**$ 1,879,492**

* In 2007 dollars, includes 6% escalation to Spring 2008 and 7.5% Design Contingency. Soft costs are not included in these figures.

An allowance of 25% for soft costs should be carried to cover the following: Contingency, Architectural / Engineering Services, LEED-related expenses including accredited consultant and Commissioning, Project Management, Construction Testing, Reimbursibles, Soils testing, Bidding, Reproductions, Advertising, FF&E (Furniture, Fixtures, and Equipment approx. at $14/sf), and bonding.

In order to address the early nature of design and subsequent design development, the estimate for Phase 1 of this project is given as a range of $7.4 - 8.6 million.

Conclusion

The pre-schematic design and corresponding preliminary construction cost estimates provide a benchmark against which further planning and budgeting decisions can be made.

There are many potential variables that can affect the ultimate scope and cost of the building: escalation costs; additional funding sources; unknown subsurface conditions; utility backcharges; change in program scope.

The conservation land transfer to the Town for use as a Senior Center is conditional upon State Legislature approval.

Further Investigation

Further investigation is required prior to or during final design.

- Site Topographical Survey
- Determination of gravity sewer route
- Soils Testing (for structural purposes)
- Percolation Testing (for stormwater management)
- Hydrant Flow Test
- Wetlands Inventory / Buffer Areas
- Hazardous Material Survey

Figure 1.5 Model of proposed Phase 1 development viewed from the east.

Figure 1.6 Aerial view of existing site from the east showing the building complex.

Figure 1.7 Model showing proposed Phase 2 building development viewed from the southeast.